

LIGHTWEIGHT COARSE GROUT (Portland : Coarse Lightweight Sand : Lightweight Gravel)

1. PRODUCT NAME

SPEC MIX® Lightweight Coarse Grout

2. MANUFACTURER



Packaged Concrete, Inc.

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3. PRODUCT DESCRIPTION

General

Grout is a high slump concrete used to fill voids in the masonry assemblage and bind together the masonry units, mortar, and existing reinforcement into a single composite assemblage. It is a fluid mixture of cementitious materials and aggregate with high water content for ease of placement.

Basic Use

- This grout is designed to meet the applicable requirements of ASTM C 476, "Standard Specification for Grout for Masonry".
- SPEC MIX® LIGHTWEIGHT COARSE GROUT uses Portland Cement, a blend of structural lightweight and normal weight aggregates to produce a structural lightweight aggregate concrete. This product has an Equilibrium Density of 112.3 lbs/cu.ft.

- Coarse Grout may be used where the grout spaces in the brick masonry are 1.5 inches or more in width horizontally and of the block the minimum cell dimensions are 1.5 x 3 inches.
- Although approved aggregates for grout (sand and pea gravel) are limited to a maximum size of 3/8 inch, if the grout space is wide (8 inches or more horizontally between the brick wythes) a coarse grout using 1/2 inch aggregate may be used. This larger size aggregate takes up more volume.
- See also Section 2404 (f).
- The actual grout space or grout cell dimensions must be larger than the sum of the following items: (1) The required minimum dimensions of total clear areas in Table No. 24-G; (2) The width of any mortar projections within the space; and (3) The horizontal projections of the diameters of the horizontal reinforcing bars within a cross section of the grout space or cell.
- The minimum dimensions of the total clear areas shall be made up of one or more open areas with at least one area being 1/2 inch or greater in width.

Benefits

- Easier to handle
- Reduced dead weight
- Lower thermal conductivity
- Increased fire ratings

Composition and Materials

- Type I Portland Cement**
 (ASTM C 150) "Standard Specification for Portland Cement"
- Concrete Aggregate**
 (ASTM C 33) "Standard Specification for Concrete Aggregates"
- Lightweight Concrete Aggregate**
 (ASTM C 330) "Standard Specification for Lightweight Aggregates for Structural Concrete"
- Air Entraining Admixture**
 (ASTM C 260) "Standard Specification for Air-Entraining Admixtures for Concrete"

4. INSTALLATION

Mixing

- This material needs to be mixed longer than standard grout to allow the lightweight aggregate time to absorb excess water.
- 1) Add one gallon of potable water to a mechanical batch type mixer.
 - 2) Add one bag of SPEC MIX® Lightweight Grout.
 - 3) Continually blend water and dry materials for 2 minutes.
 - 4) Let material sit in mixer for 3 minutes.
 - 5) Remix material and add enough water (1/4-1/2 gallon) to bring the material back to a proper working consistency.

Field Sampling & Testing

- When testing grout follow ASTM C 1019 "Standard Test Method for Sampling and Testing Grout".
- Cylinder or cube samples of grout are not allowed.
- During construction, grout is placed within or between absorptive masonry units. Excess water must be removed from grout specimens in order to provide compressive strength test results more indicative of the grout strength in the wall. In this test method, molds are made from masonry units having the same absorption and moisture content characteristics as those being used in the construction.
- Cover packaged material at all times.

TABLE NO. 24-G GROUTING LIMITATIONS

MINIMUM DIMENSIONS OF THE TOTAL CLEAR AREA WITHIN GROUT SPACES AND CELL			
Grout Type	Grout Pour Max. Height (Feet)	Multi- Wythe Masonry	Hollow- Unit Masonry
Coarse	1	1.5	1.5 x 3
Coarse	5	2	2.5 x 3
Coarse	8	2	3 x 3
Coarse	12	2.5	3 x 3
Coarse	24	3	3 x 4

LIGHTWEIGHT COARSE GROUT (Portland : Coarse Lightweight Sand : Lightweight Gravel)**5. APPLICABLE STANDARDS**

- (ASTM C 33) "Standard Specification for Concrete Aggregates"
- (ASTM C 138) "Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete"
- (ASTM C 157) "Standard Test Method for Length Change of Hardened Hydraulic-Cement Mortar and Concrete"
- (ASTM C 173) "Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method"
- (ASTM C 260) "Standard Specification for Air-Entraining Admixtures for Concrete"
- (ASTM C 330) "Standard Specification for Lightweight Aggregates"
- (ASTM C 404) "Standard Specification for Aggregates for Masonry Grout"
- (ASTM C 476) "Standard Specification for Grout for Masonry"
- (ASTM C 567) "Standard Test Method for Determining Density of Structural Lightweight Concrete"

6. LEED INFORMATION**Applicable Credits:**

- M R Credit 4.1
- M R Credit 4.2
- M R Credit 5.1
- M R Credit 5.2
- Pre Consumer Recycled Content 80%
- Local Harvest Content..... 100%
- Production Location
 - City..... Elburn
 - State..... Illinois
 - Zip..... 60119
- 100% harvested w/in 500 miles

7. PHYSICAL PERFORMANCE**Minimum Compressive Strength (ASTM C 476)**

7 Day	6,720 psi
28 Day	7,450 psi

Air Content (ASTM C 173)

4% - 7%

Oven Dry Density (ASTM 567)

Oven Dry 103.7 lbs/cu.ft.

Equilibrium Density (ASTM 567)

112.3 lbs/cu.ft.

Unit Weight (ASTM C 138)(Wet)

113.4 lbs/cu.ft.

Length Change (ASTM C 157)

0.006% @ 7 Days
-0.010% @ 28 Days

Pull-Out Testing

10,266 lbs @ 7 Days
11,564 lbs @ 28 Days

8. TECHNICAL SERVICES**Brian Petty, PCI**

1S950 South Lorang Road
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9. SAFETY/HEALTH

- Refer to M.S.D.S. for safety/health info.

10. WARRANTY

SPEC MIX, Inc warrants this product to be of merchantable quality when used or applied in accordance with the instructions hereon. This product is not warranted as suitable for any purpose or use other than the general purpose for which it is intended. Liability under this warranty is LIMITED to the replacement of the product (as purchased) if found to be defective, or at the shipping companies' option, to refund the purchase price. All claims under this warranty must be written and submitted to SPEC MIX, Inc.